

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 July 2003 (24.07.2003)

PCT

(10) International Publication Number
WO 03/060233 A1

(51) International Patent Classification⁷: **D21H 23/50**

(21) International Application Number: **PCT/FI03/00022**

(22) International Filing Date: 14 January 2003 (14.01.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
20020073 15 January 2002 (15.01.2002) FI

(71) Applicant (for all designated States except US): **METSO PAPER, INC.** [FI/FI]; Fabianinkatu 9 A, FIN-00130 Helsinki (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NISSINEN**, Vilho [FI/FI]; Onkimaantie 195, FIN-04660 Numminen (FI). **LINJAMÄKI**, Mika [FI/FI]; Viilarinkatu 6 A 2, FIN-04440 Järvenpää (FI). **NYKÄNEN**, Jussi [FI/FI]; Tehtaankatu 20 A 11, FIN-00140 Helsinki (FI).

(74) Agent: **BERGGREN OY AB**; P.O. Box 16, FIN-00101 Helsinki (FI).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

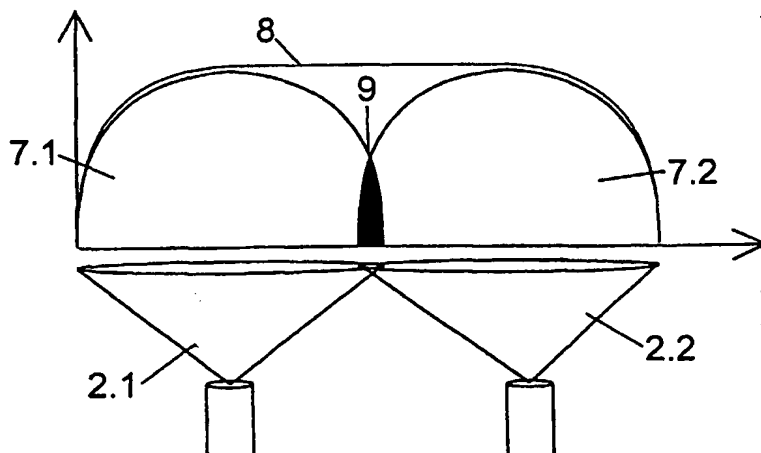
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **NOZZLE ARRAY**



(57) **Abstract:** The invention relates to a nozzle array for use in the coating of a mobile web-like material, comprising a plurality of high-pressure nozzles (2.1, 2.2) in the transverse direction of the web. The nozzles (2.1, 2.2) have been classified by a variable acting on the flow so that the deviation of the variable within the array is smaller than a pre-set value. The yield of each nozzle being the same with optimal precision, an optimally even coating is achieved on the web.



WO 03/060233 A1